Remarks

Applicants have received and carefully reviewed the Office Action mailed February 17, 2009. Claims 1, 3-4, 8-9 and 11-19 remain pending. By this Amendment, claims 1 and 19 have been amended, and claims 20-21 have been canceled without prejudice. Reconsideration and allowance of all pending claims are respectfully requested.

Allowable Subject Matter

In paragraph 6 of the Office Action, the Examiner indicated that claims 1, 3-4, 8-9 and 11-18 are allowed

Claim Objections

In paragraph 3 of the Office Action, claim 1 was objected to because the word "enable" (line 19) should be rewritten as "enables". Claim 1 has been amended to comply with the Examiner's suggestion.

Rejections under 35 U.S.C. § 103

In paragraph 5 of the Office Action, claims 19-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Auer et al. (U.S. 4,118,750). Without conceding to the Examiner's rejection, and to move prosecution along in a timely manner, claim 19 has been amended as follows:

19. (Currently Amended) A method for controlling a relay that controls the opening of a gas valve, the method comprising the steps of:

determining if a gas valve controller is currently providing a valid gas valve control signal, wherein the determining step includes determining if the gas valve controller is providing an input signal that includes a first frequency signal for a first period of time followed by a second frequency signal for a second period of time;

charging a charging capacitor of a charging circuit during the first period of time when the input signal includes the first frequency signal;
charging a drive capacitor of a drive circuit during the second period of time when the input signal includes the second frequency signal, wherein a charged voltage across the drive capacitor of the driving circuit provides a current to the relay to maintain the relay in its current state when the charging capacitor of the charging circuit is charging, and wherein a charged voltage across the charging capacitor enables the drive circuit to charge the drive capacitor of the drive circuit during the second period of time;
providing a signal to the relay in accordance with the gas valve control signal if the determining step determines that the gas valve controller is currently providing a valid gas valve control signal; and
closing the gas valve via the relay if the determining step determines that the gas valve controller is not currently providing a valid gas valve control signal.

As can be seen, the elements of dependent claims 20-21 have been incorporated into claim 19, and dependent claims 20-21 have been canceled without prejudice.

With respect to claim 21, the Examiner equates the first capacitor 149A of Figure 2 of Auer et al. with the charging capacitor of claim 21, and the second capacitor 149B with the drive capacitor. The Examiner then states that Auer et al. disclose that the first/second capacitors 149A/149B are charged during application of the first/second frequency signals, respectively. However, it is not seen where Auer et al. provide such a teaching. The only reference found in Auer et al. that discussed the function of the first/second capacitors 149A/149B is at column 4, lines 26-32, which states:

> The capacitors 149A and 149B serve to filter out some of the ripple of the output of the bridges 135 and 136, respectively. The capacitors 150A and 150B, in combination with their respective associated transformers T1 and T2, comprise tuning circuits for passing a predetermined dominate frequency to the respective bridges 135 and 136 (emphasis added).

As can be seen, Auer et al. disclose that capacitors 149A and 149B serve to filter out some of the ripple of the output of the bridges 135 and 136, respectively. However, there is nothing here that teaches that the first/second capacitors 149A/149B are charged during application of the first/second frequency signals, respectively, as the Examiner suggests.

The Examiner also states that during the first frequency, when charging capacitor 149A is being charged, drive capacitor 149B is being discharged. This is also not at all clear. When a first frequency (e.g. high frequency) is present between terminals 131 and 132, bridge 135 is active and provides a dc voltage between nodes 137 and 138. Current thus passes through resistor 141, causing a voltage drop across resistor 141. Capacitor 149A is connected in parallel with resistor 141, and thus sees this same voltage (at least at dc). Also, current passes though diode 143, lamps 144 and 145, and resistor 142. This produces a voltage drop across resistor 142, which is seen across capacitor 149B (at least at dc). When a second frequency (e.g. low frequency) is present between terminals 131 and 132, bridge 136 is active and provides a dc voltage between nodes 139 and 140. Current thus passes through resistor 142, causing a voltage drop across resistor 142. Capacitor 149B is connected in parallel with resistor 142, and thus sees this same voltage (at least at dc). Also, current passes though diode 146, lamps 147 and 148, and resistor 141. This produces a voltage drop across resistor 141, which is seen across capacitor 149A (at least at dc).

As such, when a first frequency (e.g. high frequency) is applied between terminals 131 and 132, the voltages across capacitors 149A and 149B are in a steady state (i.e. not charging or discharging) at least at dc. Also, when a second frequency (e.g. low frequency) is applied between terminals 131 and 132, the voltages across capacitors 149A and 149B are in a steady state (i.e. not charging or discharging) at least at dc. During a transient, and when filtering out some of the ripple of the output of the bridges 135 and 136, capacitors 149A and 149B may indeed be briefly charging or discharging to perform the filtering function. However, this cannot be considered as equivalent to, for example: "a charged voltage across the charging capacitor [e.g. capacitor 149A] enables the drive circuit to charge the drive capacitor [e.g. capacitor 149B] of the drive circuit during the second period of time", as recited in claim 19. The charged voltage across capacitor 148A does not appear to enable a drive circuit to charge capacitor 149B, particularly during the second period of time (e.g. when a low frequency signal is being applied between terminals 131 and 132). In view of the foregoing, and if the Examiner elects to

maintain this rejection, Applicant respectfully requests that the Examiner point out where in Auer et al. these and other features are specifically disclosed.

It is submitted that, in light of the above remarks, all pending claims 1, 3-4, 8-9 and 11-19 are now in condition for allowance. Reconsideration and reexamination are respectfully requested. If a telephone interview would be of assistance, the Examiner is encouraged to contact the undersigned attorney at 612-359-9348.

Respectfully Submitted,

Date: April 16, 2009

Brian N. Tufte, Reg. No. 38,638
CROMPTON, SEAGER & TUFTE, LLC
1221 Nicollet Avenue, Suite 800
Minneapolis, Minnesota 55403-2420
Telephone: (612)-359-9348
Facsimile: (612) 359-9349
Email: Brian.Tufte@cstlaw.com